

CHAPTER 4

DISASSEMBLY/ASSEMBLY AND ADJUSTMENT

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Disassemble/Assemble

This section describes how to disassemble and assemble the machine. First, disassembling/ assembling of the unit, next, disassembling of each unit are shown. To assemble each unit, follow in the reverse order of disassembling. Pay attention to the following cautions when disassembling and assembling the machine.

- (1) Confirm that power of the machine is off.
- (2) Disconnect options and cables that are connected to the machine.
- (3) Save programs if any that are stored in the RAM of main memory and the option onto cassette tapes, etc.
- (4) When repairing, storing, or shipping the MAPLE board, care must be used to prevent any shortcircuit on the board.
- (5) Avoid placing boards that incorporate ICs (MAPLE board, LCD panel board, option board, etc.) directly on a work stand. If it is not practical, place it with the component side below (so that static electricity will not affect it).
- (6) Pay attention so that cables may not be caught by case, fitting poles, etc.
- (7) When fitting a screw, pay attention to the length of the screw.
- (8) When fitting a component with screw lock being used, be sure to apply specified screw lock.
- (9) As for boards such as MAPLE board with battery on it, power off the battery line to protect the board from short-circuit or remove the battery and keep it.

Should the board be left with the battery installed, it would be completely discharged, and the battery life might be shortened.

4.1 Main Frame

(1) Unit Disassembly and Assembly

	Disassemble Procedure	Assemble Procedure
Lower case (see Fig. 4-1.)	<p>Step 1. Turn the body upsidedown with the handle to your side.</p> <p>Step 2. Remove the screw of the battery cover and remove the cover.</p> <p>Step 3. Pull out the connector of the battery and remove the battery.</p> <p>Step 4. Remove seven screws pointed by arrows.</p> <p>Step 5. Lift up the lower cover from the right side.</p>	<p>Step 1. Same as step 1 of the disassemble procedure.</p> <p>Step 2. Remove switch panel and button of power switch.</p> <p>Step 3. Fit handle to lower case.</p> <p>Step 4. Fit lower case from speaker volume knob side (left side).</p> <p>Step 5. Fit seven screws pointed by arrows.</p> <p>Step 6. Fit switch panel and power switch button.</p> <p>Step 7. Fit battery and battery cover with screws.</p>

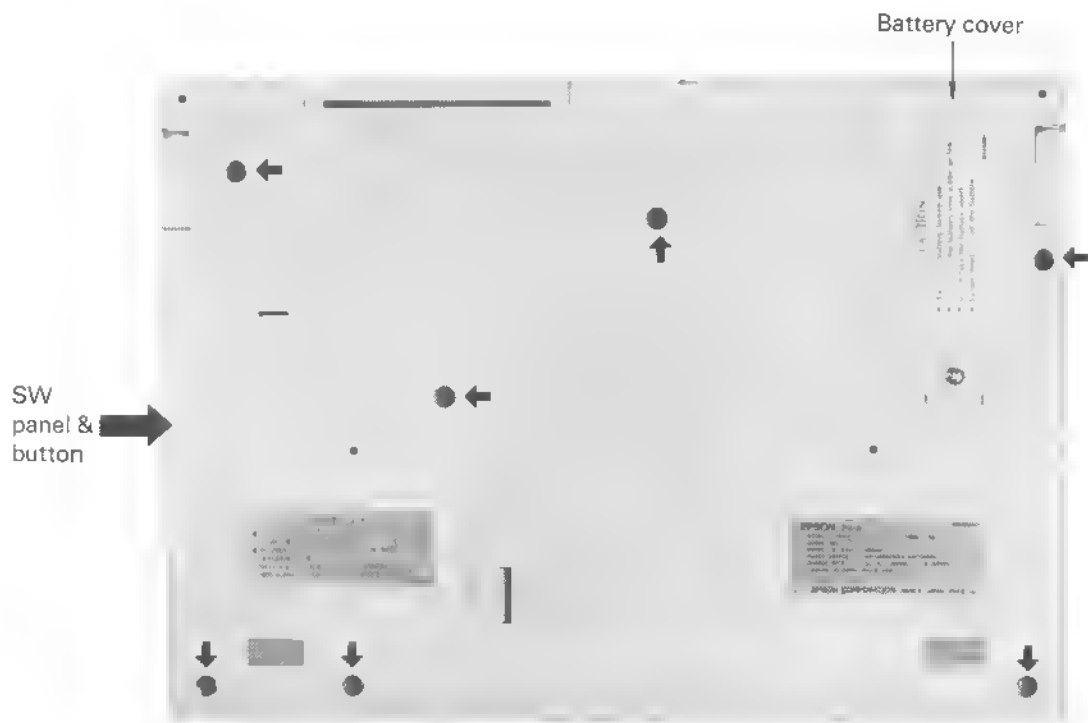
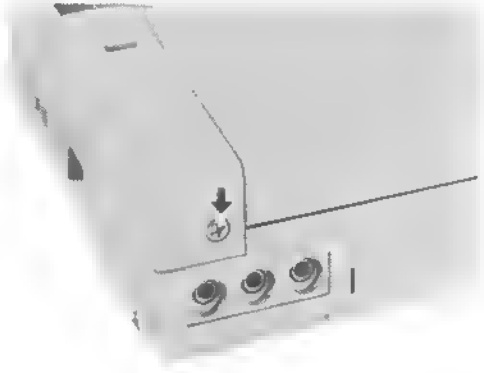
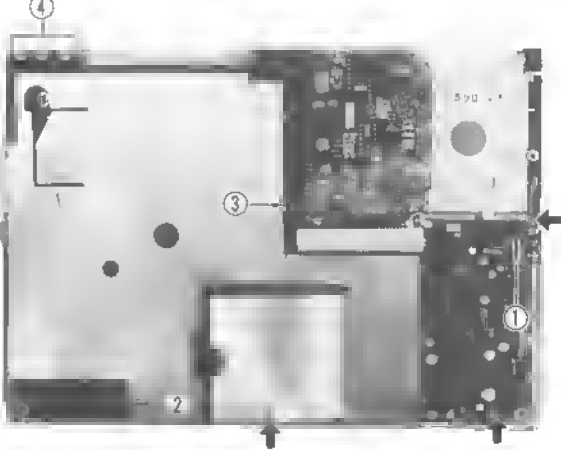
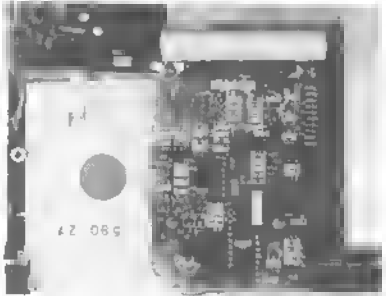
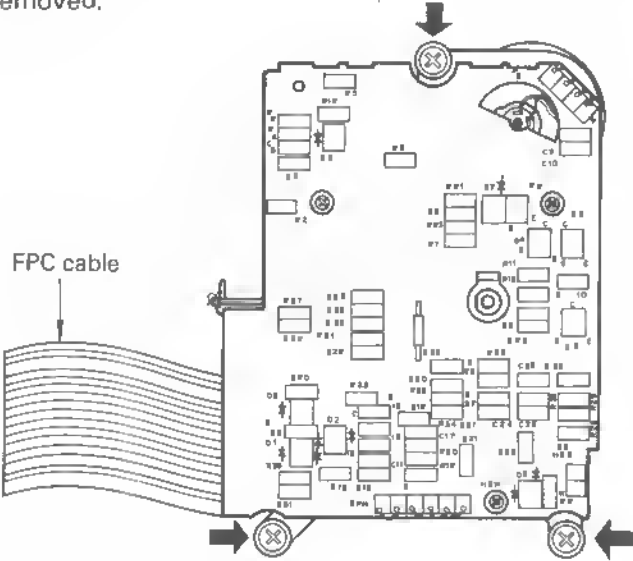
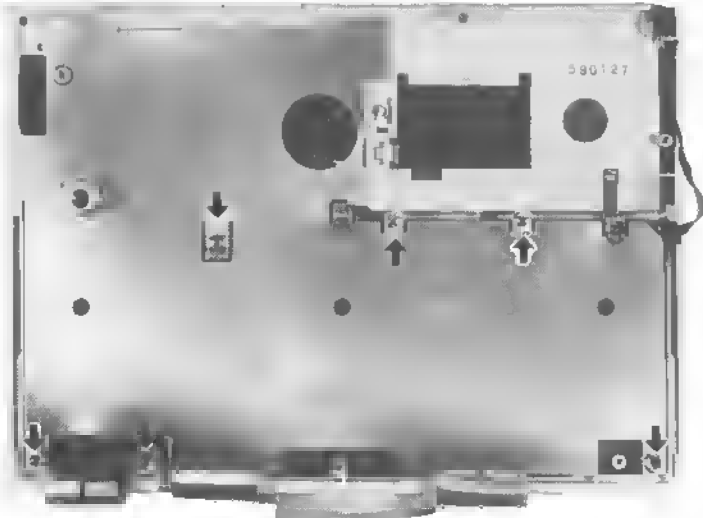
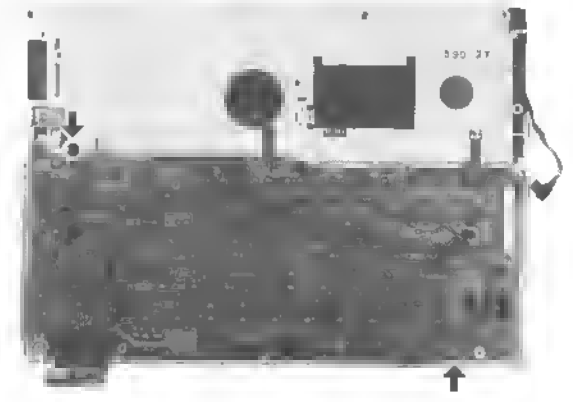
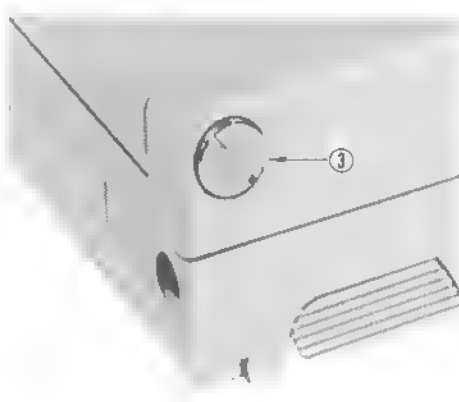
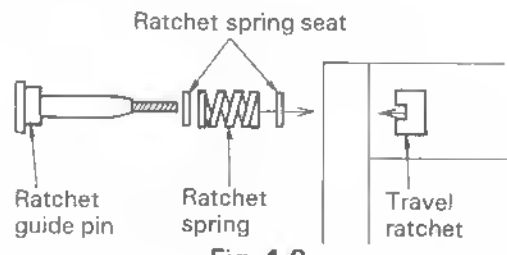
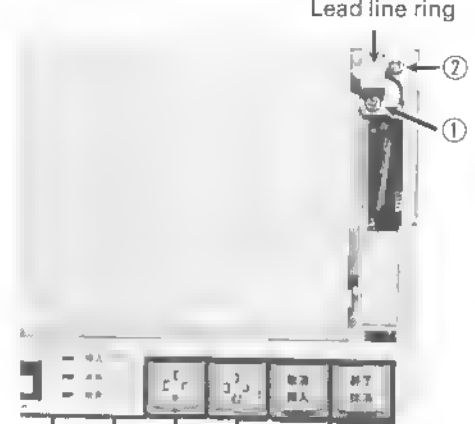
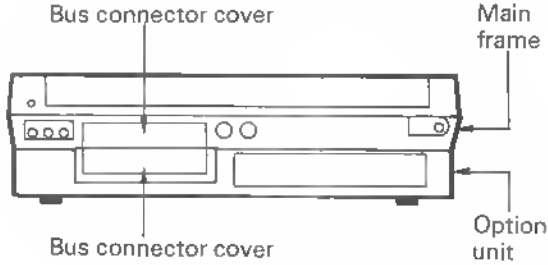
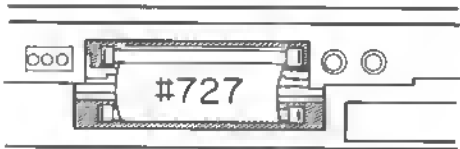
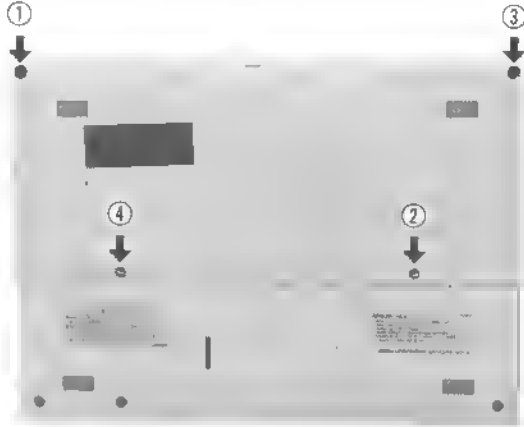
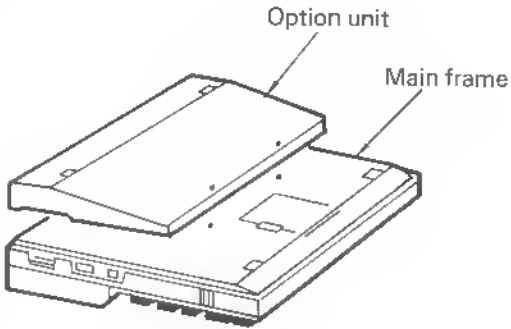


Fig. 4-1

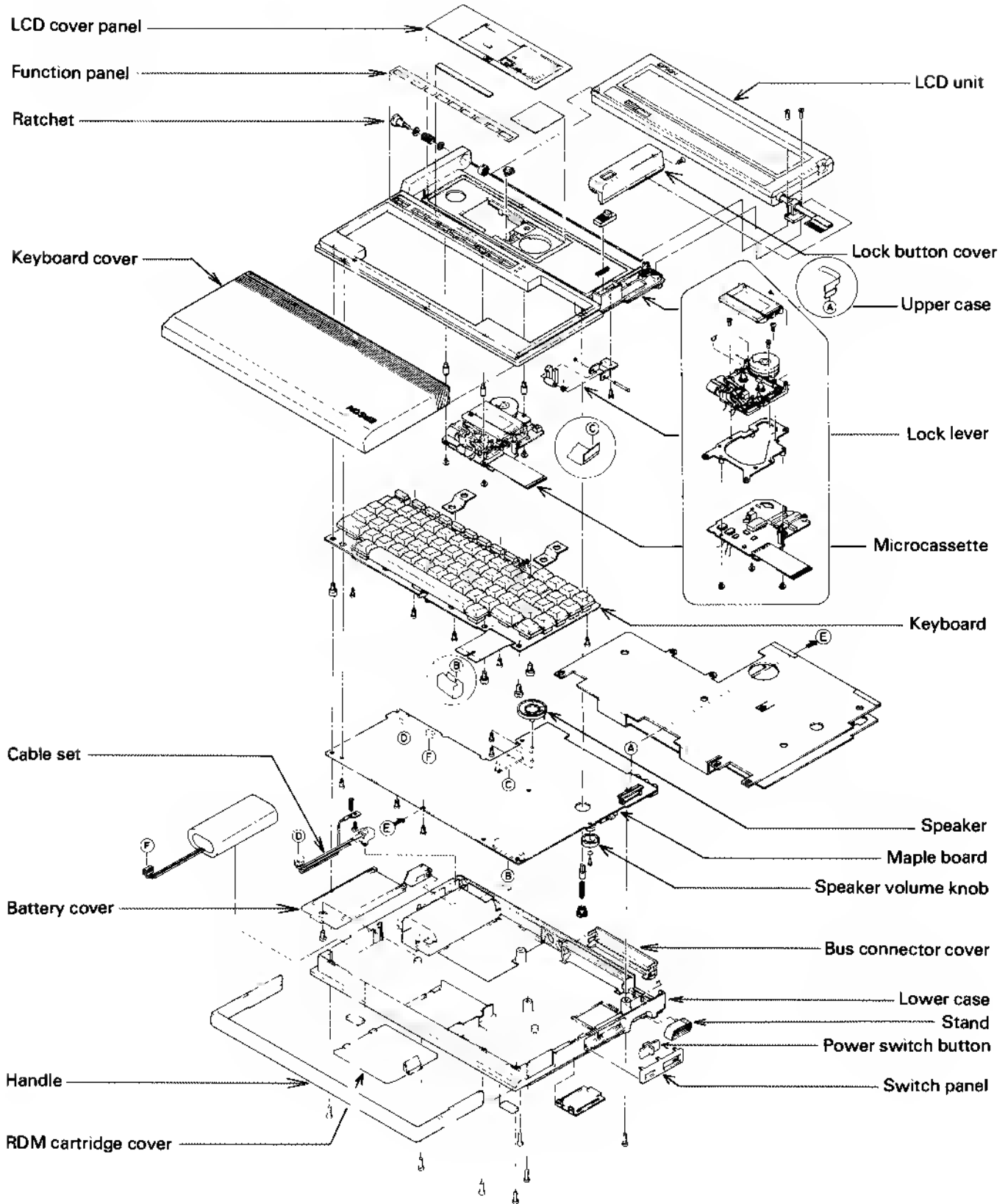
	Disassemble Procedure	Assemble Procedure
Lock button cover	<p>Step 1. Remove keyboard cover.</p> <p>Step 2. Place the body as shown in Fig. 4-2, and remove screw pointed by arrow.</p> <p>Step 3. Lift up cover slowly from right side.</p>	<p>Perform the reverse procedure to disassemble.</p>  <p>Fig. 4-2</p>
Board	<p>Step 1. Remove lock button cover.</p> <p>Step 2. Remove connector.</p> <p>Step 3. Remove FPC cable from connector CN4.</p> <p>Step 4. Remove cables from ①, ② and ③.</p> <p>Step 5. Remove three screws pointed by arrows.</p> <p>Step 6. Lift up board slowly from your side.</p>  <p>Fig. 4-3</p>  <p>Fig. 4-4</p>	<p>Step 1. Place PX-8 with lower case being removed.</p> <p>Step 2. Put jack connector ④ into specified hole.</p> <p>Step 3. Place board slowly.</p> <p>Step 4. Fit three screws pointed by arrows.</p> <p>Step 5. Fit cables to connectors ①, ② and ③.</p> <p>Step 6. Remove lock button cover and insert the FPC cable to connector (CN4).</p> <p>Step 7. After fitting the cable to the connector ①, insert cable between case and boss paying attention not to damage the cable. (see Fig. 4-4.)</p>

	Disassemble Procedure	Assemble Procedure
Micro-cas- sette	<p>Step 1. Remove lower case.</p> <p>Step 2. Remove three screws pointed by arrows.</p> <p>Step 3. Lift unit up a little horizontally and next shift unit slightly to right and lift up unit from left side.</p> <p>* Perform the above with FPC cable being removed.</p>	<p>Step 1. Place the machine so that the battery is situated in the right rear corner.</p> <p>Step 2. First align the position of right bottom screw, next, top screw, and last, left bottom screw. Place unit slowly.</p> <p>Step 3. Fit three screws pointed by arrows.</p>
<div style="text-align: center;">  <p>The diagram shows the internal components of the micro-cassette unit. Three screws are indicated by circles with an 'X' and arrows pointing to them: one at the top center, one at the bottom left, and one at the bottom right. An FPC cable is shown connected to a connector labeled 'CN3' on the left side. Various electronic components like resistors (R1-R11), capacitors (C1-C10), and integrated circuits (IC1-IC11) are labeled. The unit is shown in a perspective view.</p> <p style="text-align: right;">Fig. 4-5</p> </div>		
Shield board	<p>Step 1. Remove lower case, board and microcassette.</p> <p>Step 2. Remove four spacers pointed by arrows and two cassette fitting poles.</p> <p>Step 3. Lift up shield board slowly.</p>	<p>Step 1. After fitting keyboard, bring down shield board slowly aligning it to the hole.</p> <p>Step 2. Fit four spacers and two cassette fitting poles.</p>
<div style="text-align: center;">  <p>The photograph shows the shield board, a metal plate with various cutouts and mounting points. Four spacers are indicated by downward-pointing arrows, and two cassette fitting poles are indicated by upward-pointing arrows. The board is shown in a perspective view.</p> <p style="text-align: center;">Fig. 4-6</p> </div>		

	Disassemble Procedure	Assemble Procedure
<p>Key-board</p>	<p>Step 1. Remove lower case, board and shield board.</p> <p>Step 2. Remove two screws pointed by arrows.</p> <p>Step 3. Lift up keyboard unit slowly from microcassette side.</p>  <p style="text-align: center;">Fig. 4-7</p>	<p>Step 1. Turn over upper case.</p> <p>Step 2. Turn over keyboard unit and bring down slowly from space key side.</p> <p>Step 3. Fit two screws pointed by arrows.</p>
<p>LCD unit</p>	<p>Step 1. Remove lock button cover and connector (CN4).</p> <p>Step 2. Lock LCD unit.</p> <p>Step 3. Remove screws in the order ①, ② and ③.</p> <p>Step 4. Release LCD unit lock and lift up unit slowly from lock side with LCD face up.</p>  <p style="text-align: center;">Fig. 4-8</p>	<p>Step 1. Fit travel ratchet as shown in Fig.4-9.</p>  <p style="text-align: center;">Fig. 4-9</p> <p>Step 2. Fix LCD unit ratchet to the body and set lead line ring bearing and lock LCD unit.</p> <p>Step 3. Tighten screws ①, ② and ③ as shown in Fig. 4-10 and 4-8.</p>  <p style="text-align: center;">Fig. 4-10</p>

	Disassemble Procedure	Assemble Procedure
Option unit	<p data-bbox="269 153 800 243">Step 1. Remove expansion bus connector cover of option unit and bus connector cover of the main frame.</p> <div data-bbox="277 300 821 562">  </div> <p data-bbox="492 642 605 674">Fig. 4-11</p> <div data-bbox="313 772 769 919">  </div> <p data-bbox="492 993 605 1024">Fig. 4-12</p> <p data-bbox="269 1056 824 1119">Step 2. First remove option side connector and next main frame side connector.</p> <p data-bbox="269 1150 768 1213">Step 3. Remove four screws pointed by arrows.</p> <div data-bbox="285 1220 805 1644">  </div> <p data-bbox="492 1686 605 1717">Fig. 4-13</p>	<p data-bbox="862 153 1393 216">Step 1. Remove connector covers both of option and main frame.</p> <p data-bbox="862 247 1422 373">Step 2. Fit option unit as shown in Fig. 4-14, and tighten screws tentatively in the order of ① to ④ on Fig. 4-13, and last, tighten them fully.</p> <p data-bbox="862 405 1422 468">Step 3. Fit connector first to option side and second to main frame side.</p> <p data-bbox="862 499 1422 562">Step 4. Fit connector cover from main frame side and next, option side.</p> <div data-bbox="886 621 1393 947">  </div> <p data-bbox="1081 1041 1195 1073">Fig. 4-14</p>

Exploded View of Main Frame



Dverview
Fig. 4-15

4.2 Disassemble/Assemble of Each Unit

4.2.1 Keyboard

(1) Normal (normal size)

- Step 1. Remove key top using key top puller.
- Step 2. Remove key switch.

(2) SHIFT key (includes the same size keys)

- Step 1. Remove key top of CTRL and A which is located on the top of specified key top.
- Step 2. Insert a thin minus screw driver between key tops and lift up one end of corresponding key. Lock can be removed.
- Step 3. Shift key and remove it from support bar.

(3) SPACE key

- Step 1. Remove key tops Z, X, C, V, B, N,which are located on the top of SPACE bar.
- Step 2. Insert a thin minus screw driver between key tops and lift up one end of key. Lock can be removed.
- Step 3. Remove key from support bar using a little screw driver.

(4) SHIFT key

- Step 4. Remove SHIFT key from switch cover using key top puller.

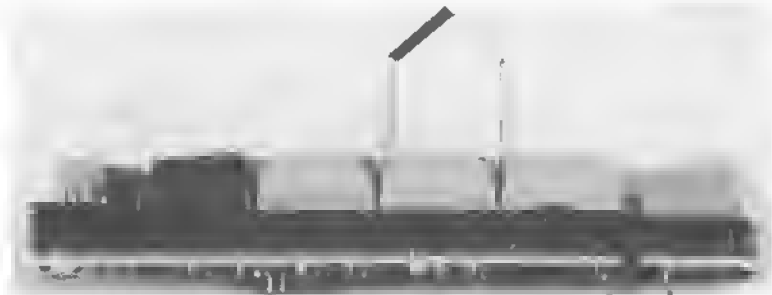


Fig. 4-16

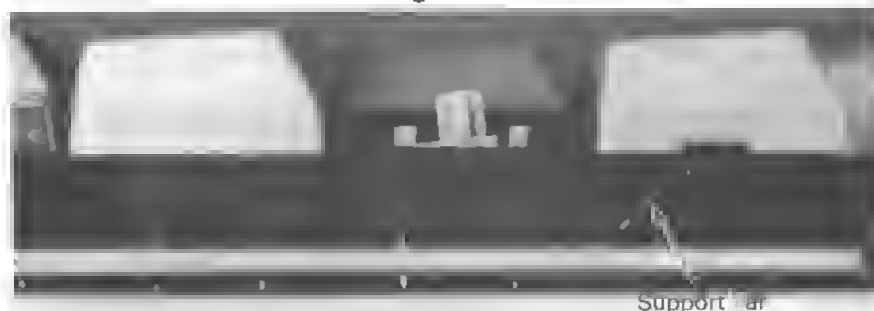


Fig. 4-17



Fig. 4-18

4.2.2 Microcassette Mechanism

- Step 1. Remove board.
- Step 2. Remove microcassette mounting bracket by loosening three screws which are marked with arrows on Fig. 4-19.

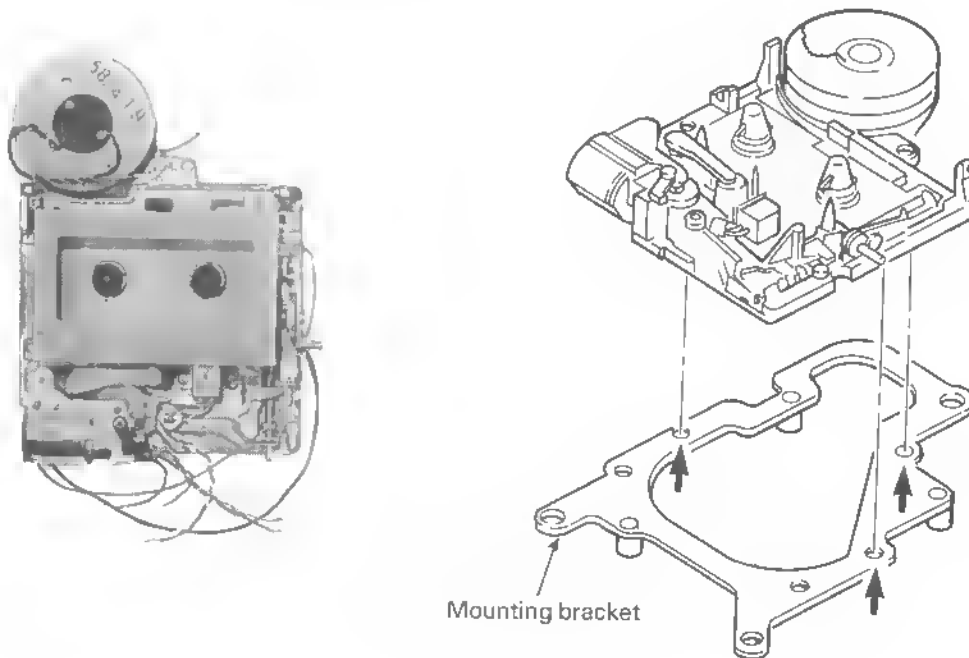


Fig. 4-19

(1) C wheel

- Step 1. Remove C support bracket by loosening two screws.
- Step 2. Remove M belt.
- Step 3. Lift up C wheel slowly.

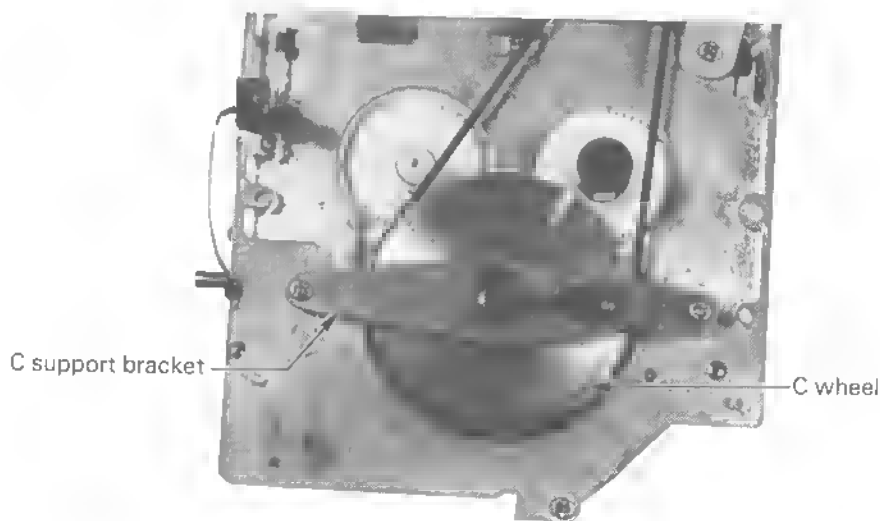


Fig. 4-20

(2) M pulley

- Step 1. Remove C support bracket.
 Step 2. Remove FG yolk by loosening screws ① and ②.
 Step 3. Loosen screws ③ and ④.
 * Pay attention to two FG spacers.

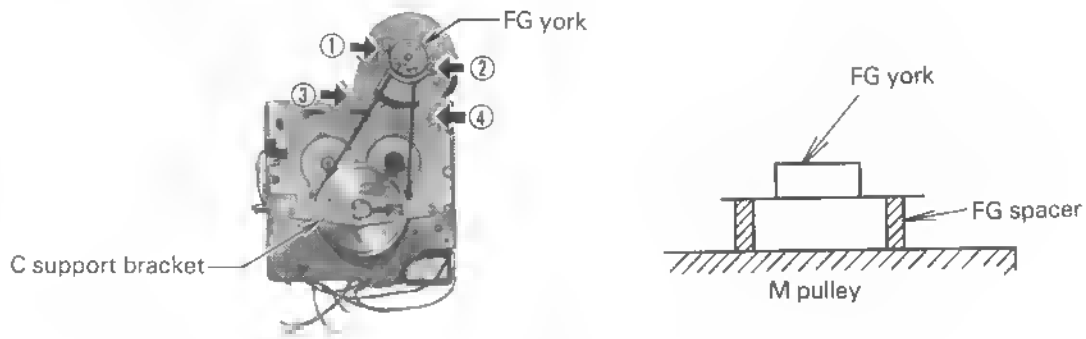


Fig. 4-21

(3) PE switch

- Step 1. Remove one screw and PE switch.

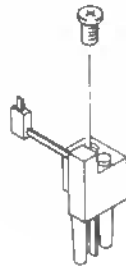


Fig. 4-22

(4) HP switch

- Step 1. Remove screw pointed by arrow.
 Step 2. Remove HP switch slowly.

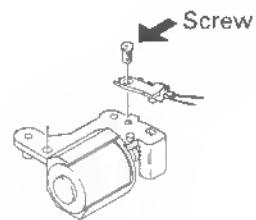


Fig. 4-23

(5) HP motor

- Step 1. Remove HP switch
- Step 2. Remove screw ① and next ②.

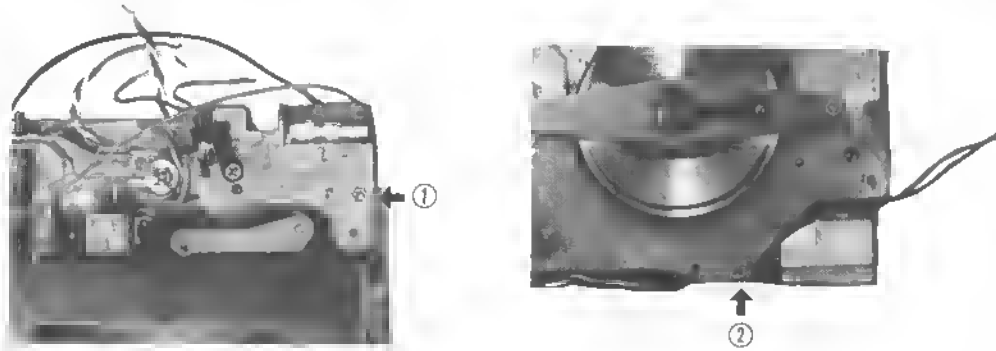


Fig. 4-24

(6) Pinch roller

- Step 1. Remove HP motor.
- Step 2. Remove E ring and lift up PR lever and spring.

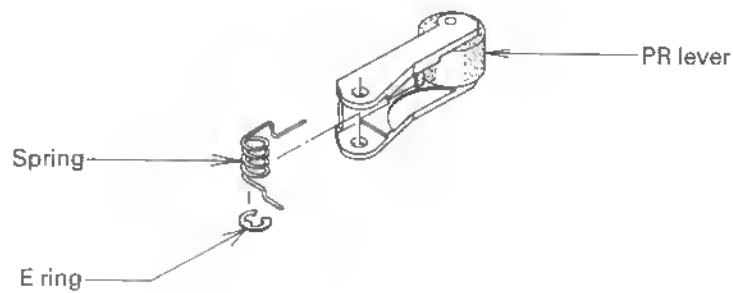


Fig. 4-25

(7) P lever (head part)

- Step 1. Remove HP motor and pinch roller.
- Step 2. Push E button spring by tweezers and remove lever from ① in a way like pulling out.

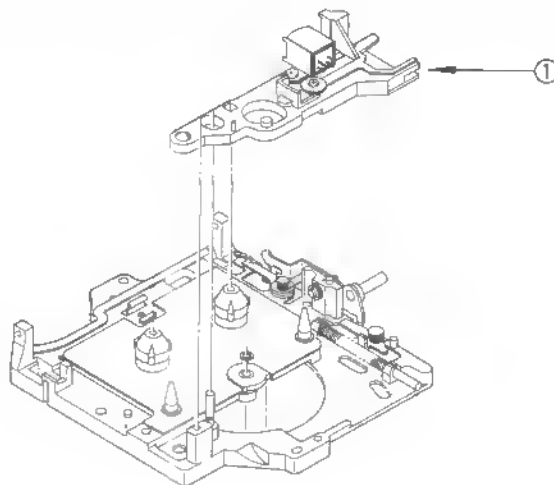


Fig. 4-26

(8) Pocket

Step 1. Remove pocket spring.

Step 2. Remove pocket pin.

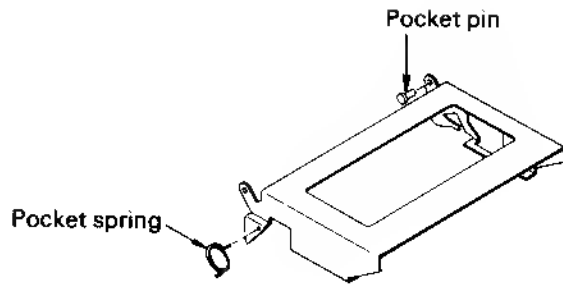


Fig. 4-27

Overview of Microcassette Mechanism

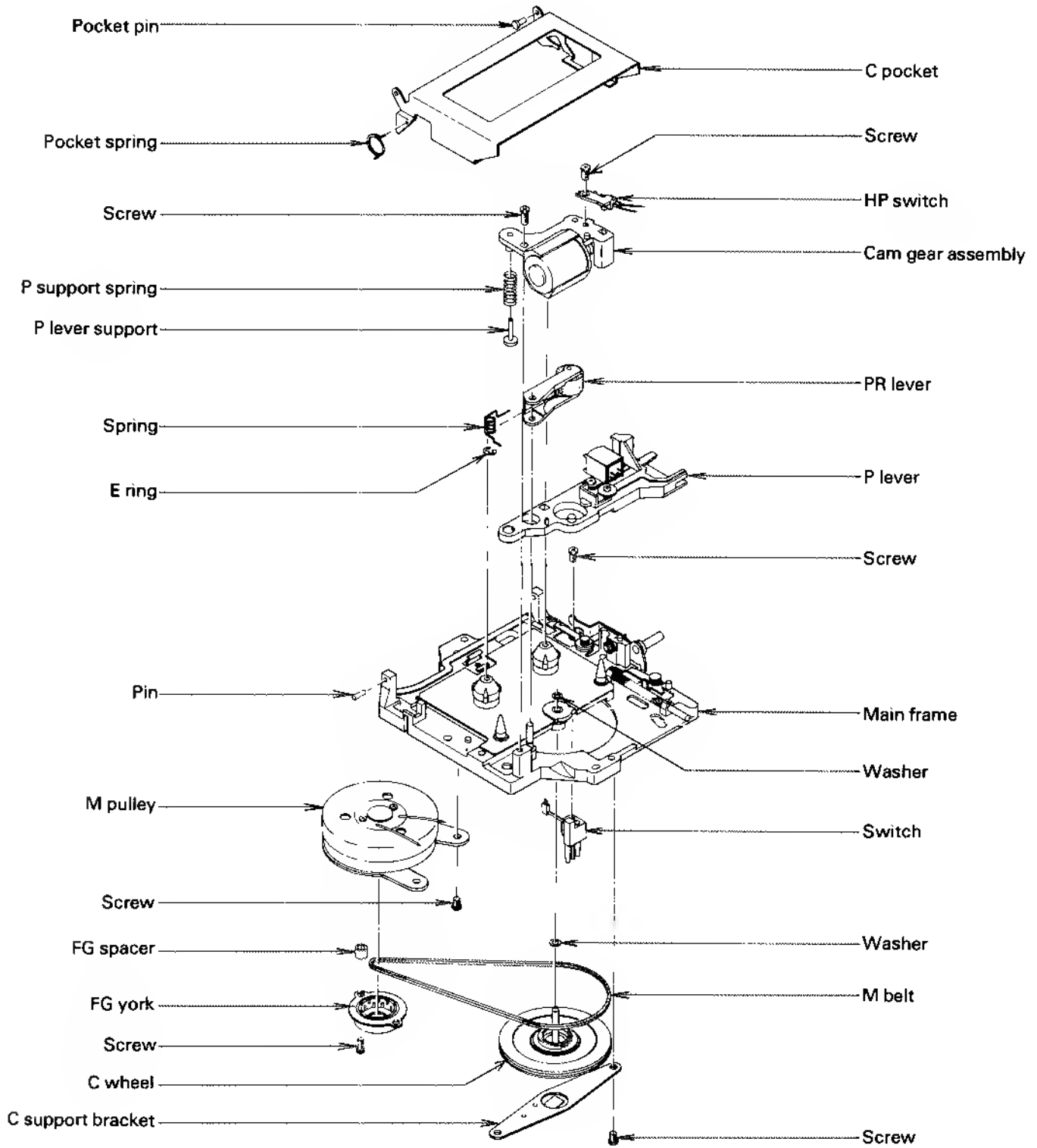


Fig. 4-28

4.2.3 LCD Unit

- Step 1. Remove LCD unit.
- Step 2. Remove cover panel. (not reusable)
- Step 3. Remove two screws pointed by arrows.

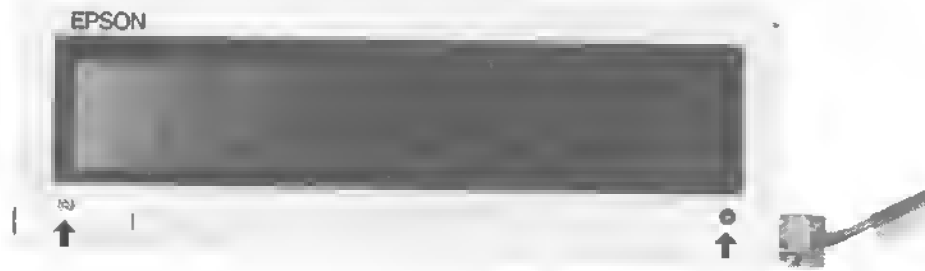


Fig. 4-29

- Step 4. Turn over unit and lift up unit slowly from screw side.
- Step 5. Remove four screws pointed by arrows and lift up board slowly.
* Pay attention to contrast button and cover glass.

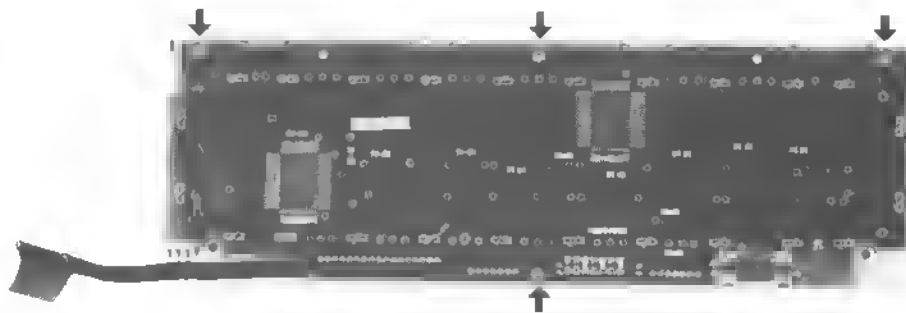


Fig. 4-30

- Step 6. Move leg of fitting bracket.

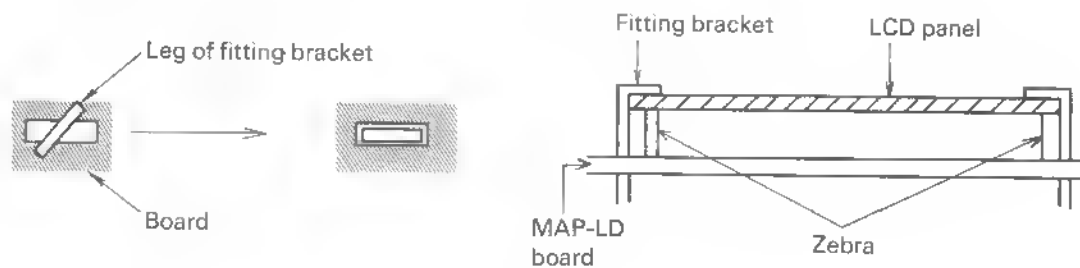


Fig. 4-31

- Step 7. Remove fitting bracket with LCD face up.
- Step 8. Remove LCD with zebra on it taking care for three pins.
- Step 9. Remove four zebras and zebra guide.

Overview of LCD Unit

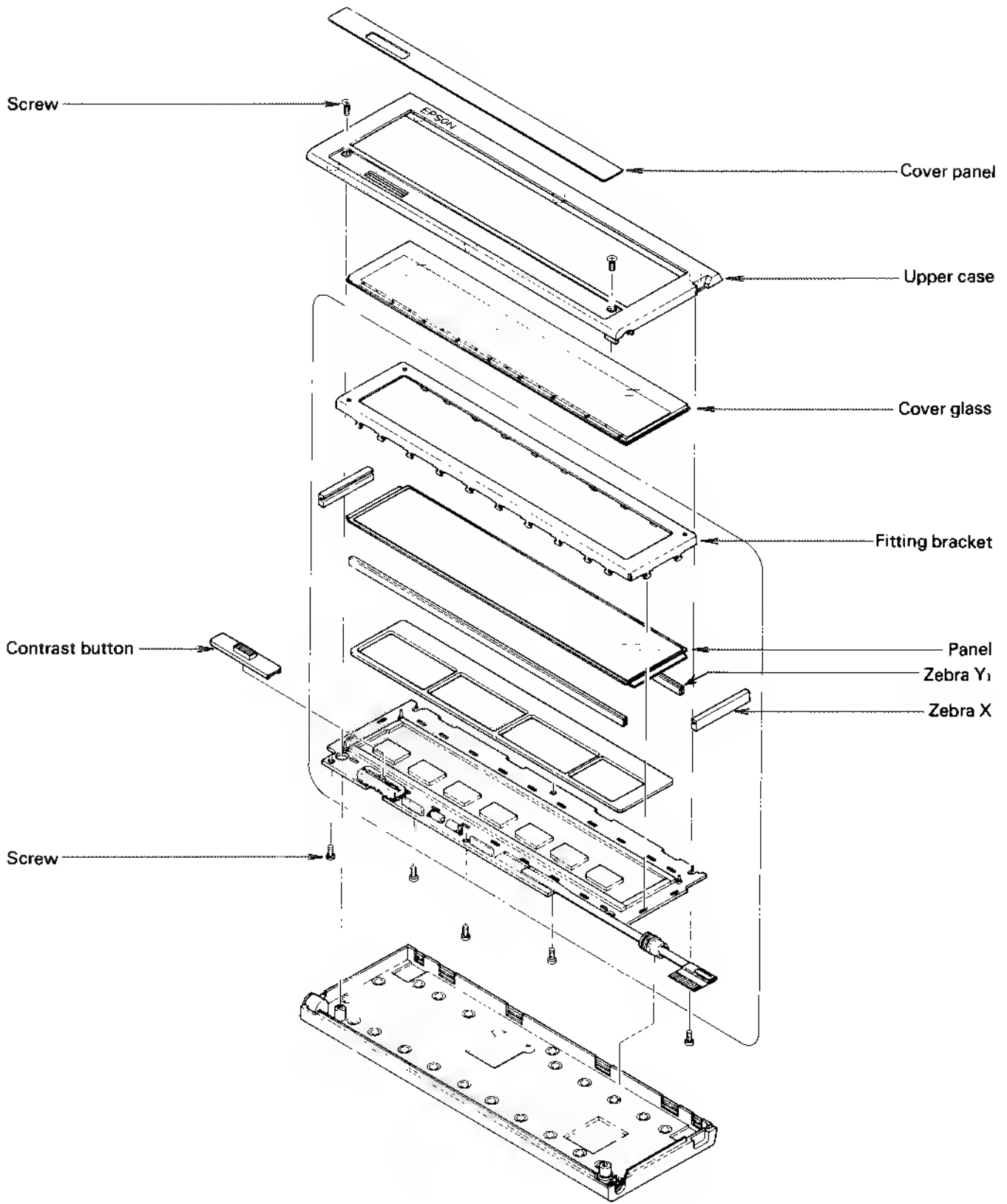


Fig. 4-32

4.3 Option Unit

- Step 1. Remove unit from the body.
- Step 2. Remove three screws pointed by arrows.

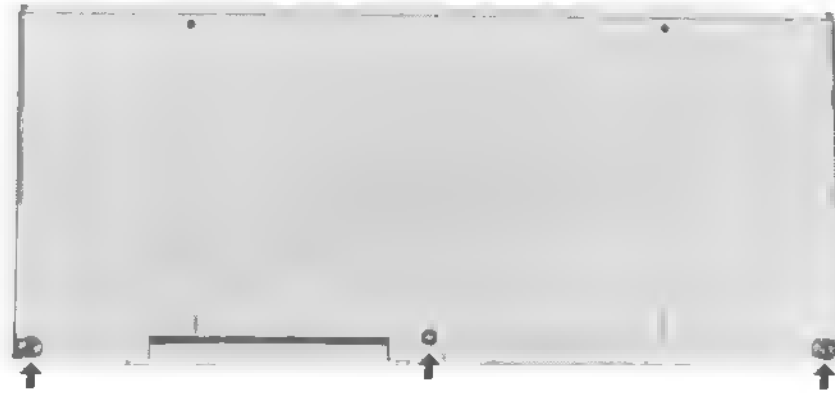


Fig. 4-33

- Step 3. Remove case cover from screw side.
- Step 4. Remove two screws pointed by arrows.

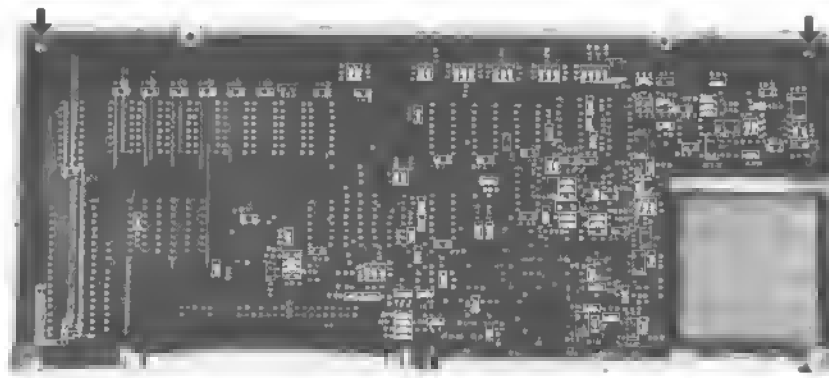


Fig. 4-34

- Step 5. Lift up unit slowly from the opposite side of connector.

Overview of Option Unit

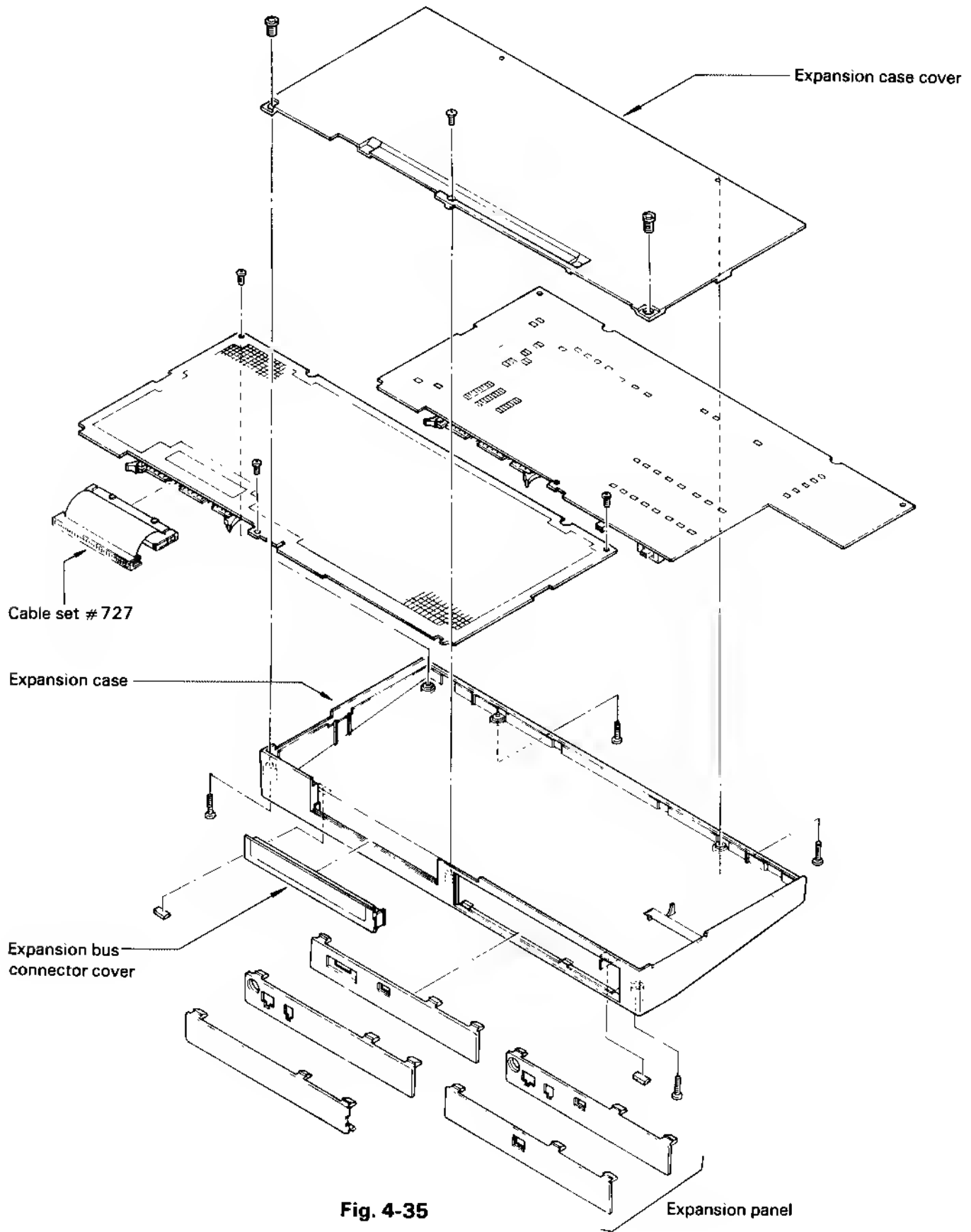


Fig. 4-35

4.4 Main Battery

Before replacing the main battery, the RAM data must be saved on an external storage device (cassette tape or floppy disk, etc.) for protection.

Main battery replacement procedure

- Step 1. Reset the POWER switch OFF.
- Step 2. Loosen the main battery cover set screw at the bottom of the computer and remove the cover.

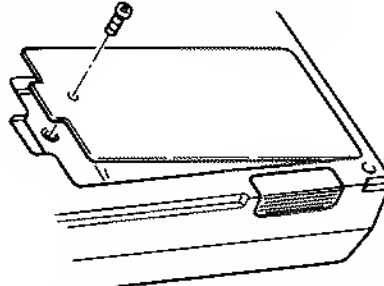


Fig. 4-36 Main Battery Cover Removal

- Step 3. Make sure that the auxiliary switch is set.

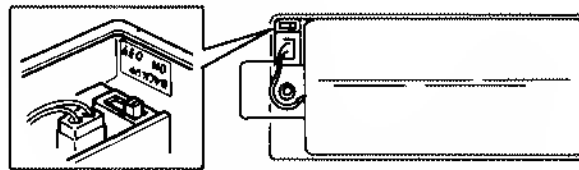


Fig. 4-37 Auxiliary Battery Switch

- Step 4. Disconnect the battery connector and remove the battery.

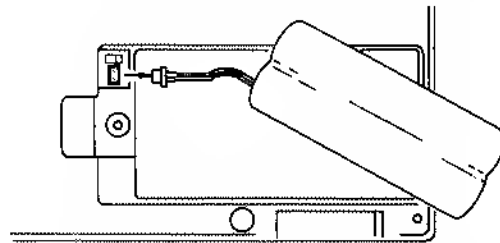


Fig. 4-38 Main Battery Removal

- Step 5. Connect the new battery connector and put the battery in place and lay the lead wire as shown in Fig. 4-39 – lay the lead wire so that it is pushed against the case and the pressure prevents it from rising.

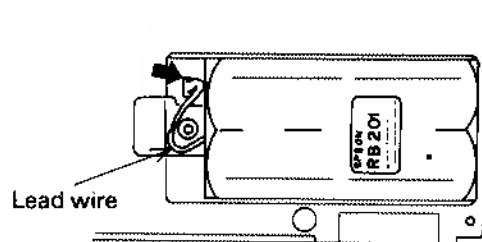


Fig. 4-39 Main Battery Installation

- Step 6. Replace the battery cover – care should be taken not to pinch the battery wires at the set screw.
- Step 7. Tighten the battery cover set screw.
- Step 8. Open the ROM capsule cover.

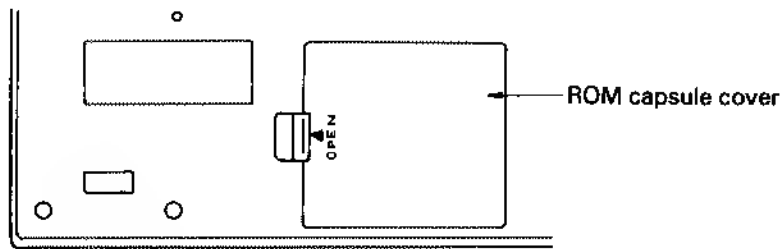


Fig. 4-40 ROM Capsule Cover

- Step 9. Push once the INITIAL RESET switch located above the ROM cover.

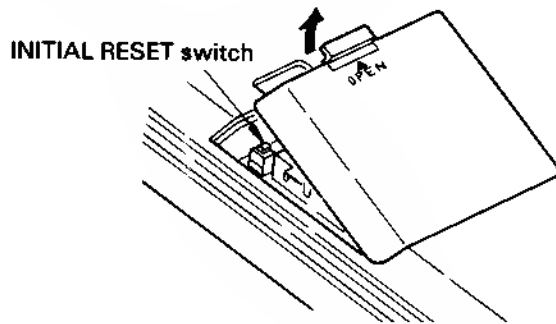


Fig. 4-41 Access to INITIAL RESET Switch

- Step 10. Replace the ROM capsule cover.

After above procedures, ^{charge}change the battery by connecting the AC adaptor. Never discard the battery into water or in fire, nor disassemble.